ePrescribing at Kaiser Permanente
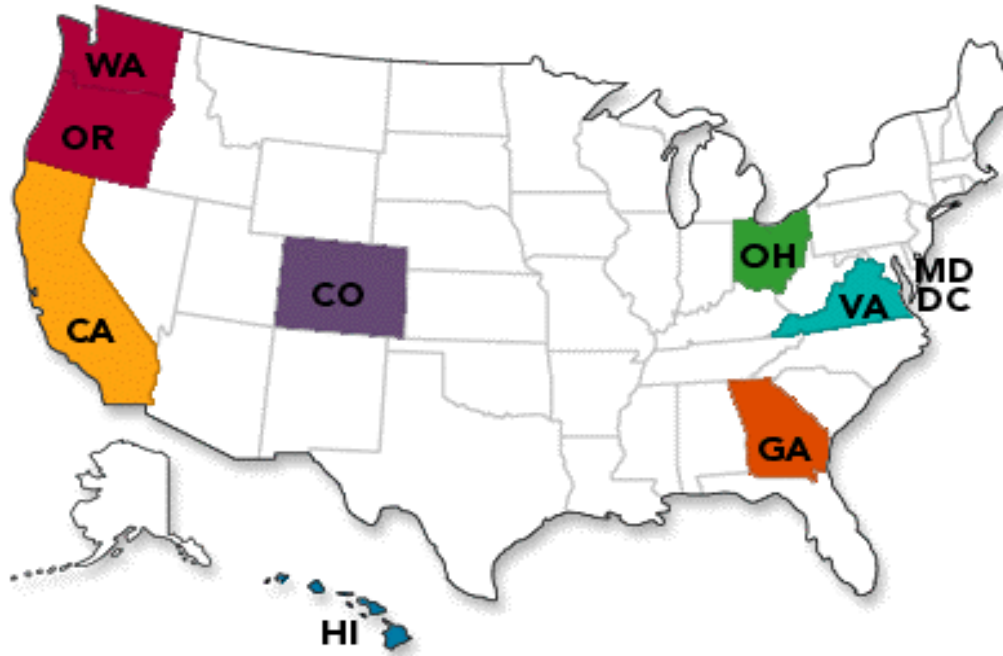
David Campen, M.D.
TPMG Medical Director Pharmacy
November 20, 2008

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Kaiser Permanente's Prescriptions By the Numbers

- >60 million prescriptions written and filled annually (nationally)
- For >6.5 million unique members, or >130,000 daily, in CA
- Nearly all prescriptions done electronically
- Generic use rate of >83% (>85% under Part D) in California
- >99.5% when generic is available
- >98% formulary prescribing –
- Open exception process
    "No 1-800 Mother may I?"

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Objectives

- Identify the benefits of the ePrescribing at Kaiser-Permanente

- Review ePrescribing workflows including Physician Order Entry, medication verification, drug interaction checking, refill management and weight based dose checking that enhance patient safety and compliance

- Discuss review tools for patient engagement in helping to manage their own healthcare

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KP Standardized Order Entry

KP Standardized Order Entry

- Fully electronic system

- 130,000 Prescriptions electronically transmitted directly to pharmacy computer system **every day**

- **NO** Faxes, No Transcription

- Only paper Rx's are for outside fills and for DEA Schedule 2 Drugs

- Linked tightly to fully electronic Medical Record

- Implemented in both Inpatient and Ambulatory

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Order Entry – Medication Review

Rapid Access to Additional Rx Informantion

Clinical Decision Support

- **Improved Monitoring** (linked to refilling)
  - Medication Adherence
  - Lab

- **Alerts**
  - Drug-Drug
  - Drug-Allergy
  - Formulary
  - Weight Based Dosing (Pediatrics)

- **Structured Order Sets**
  - Inpatient
  - Oncology

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Medication Refills - Lab

Tolinase 250mg refill request

Medication Refills - Lab

Tolinase 250 mg refill request

Instantly check HbA1c

Medication Refills - Adherence

Responses to DDI (and other) Alerts

- When a DDI alert fires, the provider can:

✓ Accept the alert
  - Cancel the drug order the you just entered
  - Remove the drug order that was already present

✓ Override the alert
  - Continue with original prescription; both drug orders remain active

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Drug-Drug Interaction Alert

Level 1 DDI Alert Rates (KP NoCal 4Q07)

- Level 1 = Contraindicated unless managed

- 23,872 Level 1 DDI Alerts fired to prescribers

- 1 alert per 185 patient encounters

- 1 alert per 106 OP Rx orders

- **22% Accepted (4Q07)**
  - ➤ In 2005 (before analysis and promotion/demotion, only 15% accepted)

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Pediatric Dosing Alerts

Working to Prevent Pediatric Medication Errors

Medication errors are seen as the most common type of medical error and as a significant cause of preventable adverse events. Research has shown that the potential for adverse drug events within the pediatric inpatient population is about three times as high as among hospitalized adults. One reason is that most medications used in the care of children are formulated and packaged primarily for adults. Another is that most health care settings are primarily built around the needs of adults, and staff often lacks pediatric-oriented training. Children are usually less able to physiologically tolerate a medication error due to still developing renal, immune and hepatic functions. And very young children are not able to effectively articulate the adverse effects that a medication may be causing.

To address pediatric medication issues, The Joint Commission issued a "Sentinel Event Alert" on April 11, 2008. The Joint Commission is an independent, not-for-profit organization that accredits and certifies more than 15,000 care organization and programs in the United States. The Joint Commission's mission is to continuously improve the safety and quality of care provided to the public through the provision of healthcare accreditation and related services that support performance improvement in health care organizations.
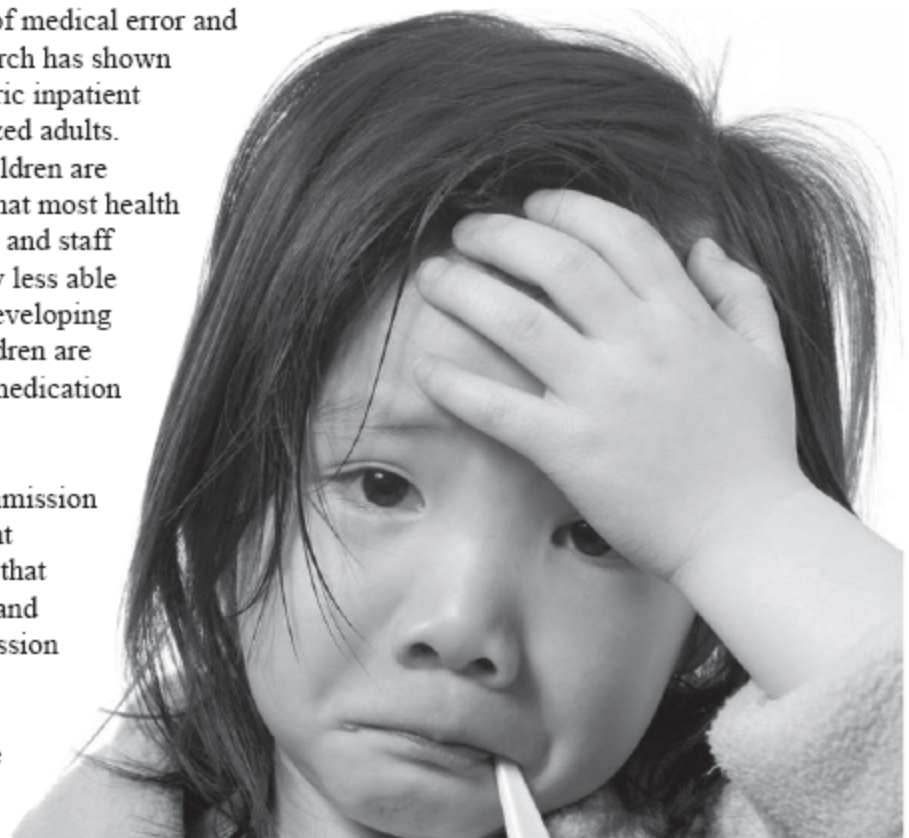
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Pediatric Dosing Alerts

Ampicillin Order 3gm every 6 hours for 12 year old

Pediatric Dosing Alerts

Built in warnings about maximum dosing alerts at time of order entry

Structured Orders Sets - Oncology

Keys to appropriate electronic alerts
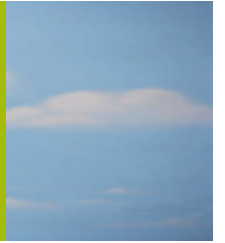
- **Efficiency**
  - Should respect clinician's time

- **Usefulness**
  - Must be accurate and relevant

- **User Interface**
  - Should have right level of intrusiveness

- **Information Content**
  - Should give right amount of information

- **Workflow**
  - Must present at the right time in the visit

- **Communicate, Communicate, Communicate**

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Patient Involvement

- Kp.org - Patient healthcare access site
  - General self help medical information
  - 40% of Membership
  - eMail you physician
  - eRefill prescriptions
  - "My Prescriptions" section
    - Shows current active prescriptions seen by all healthcare professionals within Kaiser-Permanente
    - 800 Telephone number to live pharmacist for medication questions

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My Prescriptions

Your prescriptions

□ Help

Keep track of my prescriptions

Printer-friendly version

The prescription list below includes medications currently prescribed for you by a Kaiser Permanente practitioner. The list may not include medications that you fill outside of Kaiser Permanente pharmacies, or medications that you purchase over the counter.

ZILACTIN-B 10 % MM GEL
About This Medication

Instructions: Use As Directed
Prescribed by A X CEMD MD on 03/20/08
Prescription number: 6310054884

If you have specific questions about the information on this page, please call a pharmacy representative at 1-866-301-3480 (toll free).

For your convenience, refill prescriptions online. If your bottle says 0-refill, you can still request a refill.

Related links:
□ Drug encyclopedia
□ Health encyclopedia
□ My doctor

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Currently 21% of prescriptions reordered on-line

ePrescribing - Caution

- **Alert Fatigue**

- **Provider Acceptance**
  - Engage early in process
  - Be responsive to need for change

- **Not all ePrescribing is the same**
  - Stand alone systems
  - Fax Interfaces
  - Some interfaces One-Way only
  - Many lack integration to Electronic Medical Record
  - Linkage of Inpatient vs. Ambulatory

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Summary - ePrescribing

- **Improves Medication Safety**

- **Opportunity to strategically focus decision support**
  - Target high risk agents

- **Supports safe prescribing across the continuum of care**

- **Caution with "Alert Fatigue"**

- **Huge Opportunity to involve patients**

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